



# MS2105 / MS2107

## VEHICLE SECURITY SYSTEM w/ BUILT-IN REMOTE START & UNGO-NET INTERFACE

### Installation Manual

*This vehicle security system requires interfacing with several of the vehicle's factory wiring harnesses. Be sure to verify all connections with a digital multi-meter prior to making connections. Failure to do this can result in serious damage to the vehicles electrical system or deploying an air bag(s). It is also highly recommended that all connections are soldered, rather than the use of T-Taps or Scotch Locks.*

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**IMPORTANT NOTE:** Do not install the MS2105/MS2107 into a manual transmission vehicle as it could result in serious injury or death.

## 1. Ungo-Net Interface Introduction

This product is equipped with Ungo's newest and most revolutionary technology to date, the *Ungo-Net* bus system. The *Ungo-Net* bus has several advantages for both the installer and consumer allowing system expansion and pain free troubleshooting. All *Ungo-Net* equipped systems feature a special port that interfaces directly with most Windows® based PCs (requires optional Ungo-Net **PCLINK**). This port can be used to identify a faulty trigger input, double check the installation, and change system parameters. In the diagnostic mode, it is able to retrieve the last 8 trigger events. This is extremely useful in determining whether the vehicle has a faulty pin switch or the sensitivity of the shock sensor is set too high.

Pressing the Valet Switch and counting siren chirps will become a thing of the past with *Ungo-Net*. *Ungo-Net* lets the installer custom tailor the security system to the needs of the consumer. With the optional 2-way LCD transmitter and receiver kit, the consumer will have the luxury of a LCD remote transmitter. The LCD remote provides both audible and visual confirmation of system functions using 2-way communication between the vehicle and the transmitter. This communication can notify the owner of the status of the vehicle (armed, disarmed, etc.), as well as any violation attempts. The 2-way transmitter's advanced design also provides longer, more consistent range than a conventional transmitter.

For those individual's that need additional auxiliary outputs, an auxiliary channel expander (part # **AUX BOX**) can be added to the unit, providing 7 additional outputs to the system. Using the *Ungo-Net* PCLINK, the installer can designate each auxiliary function as a momentary, latched, or timed output.

### Optional Ungo-Net Accessories

- **PCLINK**: Includes Ungo-Net software, serial cable, instructions, and power supply.
- **FMKIT**: Includes LCD transmitter, extended range antenna, instructions, and transceiver module.
- **AUX BOX**: Includes accessory module, wiring harness, and instructions.

## 2. Before You Begin

- Prior to beginning the installation of the Ungo MS2105 / MS2107, be sure that you have completely read and understand this installation manual.
- Verify all the vehicle's functions work properly prior to installation (i.e.: power windows, power door locks, climate controls, radio, etc.)
- Check with the vehicle's owner on the location of the status LED and valet switch.
- Protect the vehicle by using fender and seat covers.
- Double-check the location before drilling. Make sure that there are no wire looms, hoses, or other obstructions. Failure to verify can result in serious damage to the vehicle.
- Roll down a window(s) before beginning installation, to prevent getting locked out of the vehicle.
- Set the Polarity Jumper inside the main unit for the Parking Lights.

**Warning:** Probing wires with a Test Light can result in serious damage to the vehicle's electrical system and/or deploy air bag system.

## 3. After The Installation is Complete

- Verify all the vehicle's functions work properly after the installation (i.e.: power windows, power door locks, climate controls, etc.).
- Test all functions of the vehicle security system and make any changes to the system parameters if necessary.

## 4. System Contents

- Main Unit .....1
- 5-Button 1-way Transmitter (MS2105 / MS2107) .....2/1
- 5-Button 2-way LCD Transmitter (MS2107 only) .....1
- 20-Pin Main Harness .....1
- 2-Pin Status LED Harness .....1
- 2-Pin Valet Switch Harness .....1
- 3-Pin Door Lock Harness .....1
- 4-Pin Shock Sensor Harness and Shock Sensor .....1
- 14-Gauge Starter wires with Insulated .250 Connectors .....1
- Window Decals .....2
- Owner's Manual .....1
- Installation Manual .....1

## **5. Installation Tips and Suggestions**

- Use a digital multi-meter to test all wires; DO NOT use a Test Light.
- Check door and trunk pin switches prior to beginning installation. Replace faulty pin switches with either a factory or a high quality replacement pin switch.
- Good power and ground connections are essential for proper operation of the security system. Ground the alarm as close to the main unit as possible.
- Route all wires from the engine compartment to the interior of the vehicle through a grommet using electrical tape and/or split tubing for protection and camouflaging.
- When adding additional accessories to the security system, such as window modules, electronic trunk release, etc., be sure to fuse each accessory independently from the main power source for the security system.
- If extending any wires of the security system is necessary, be sure to use the same or thicker gauge of wire.
- Never bypass the supplied fuses on the wiring harnesses, as those are designed to protect the security system and vehicle.
- For maximum security, disguise all the wires under the hood and under the dash with black tape and/or split tubing.

## **6. Mounting Components**

### **6.1 Siren**

1. Mount the siren in suitable location under the hood that will not interfere with the functionality of the vehicle and away from source of extreme heat (i.e.: exhaust manifold).
2. Make sure the siren cannot be easily accessed from underneath the vehicle or through the grill.
3. Face the siren facing downward, so water does not accumulate inside the siren housing.
4. It is recommended to ground the siren at the same location of the alarm main unit, not at the siren bracket.
5. Always run wires from under the hood to the cabin area of the vehicle through the center of a grommet. Running wires along bare metal can cause chaffing on the wire, leading up to a possible short.
6. Camouflage the siren wires with black tape and/or split tubing.

### **6.2 Main Unit**

1. Mount the main unit high up within the dash, where it requires removing under dash panels to access the main unit.
2. Make sure the main unit is away from sources of heat, such as the heater core.
3. Verify that none of the wiring for the main unit will get tangled up in the steering column and/or pedals.
4. Be sure to wire tie the main unit into place to prevent the main unit from being easily removed or pulled down.
5. Before mounting the main unit, make sure to test all functions of the system and complete all system programming.

### **6.3 Dual Stage Shock Sensor**

1. Mount the shock sensor in the interior of the vehicle, not in the engine compartment. The shock sensor can be mounted with wire ties or screwed in. Do not double side tape the shock sensor in place, as the tape will eventually lose its adhesion.
2. Make sure the shock sensor is away from sources of heat, such as the heater core.
3. Verify that none of the wiring for the shock sensor will get tangled up in the steering column and/or pedals.

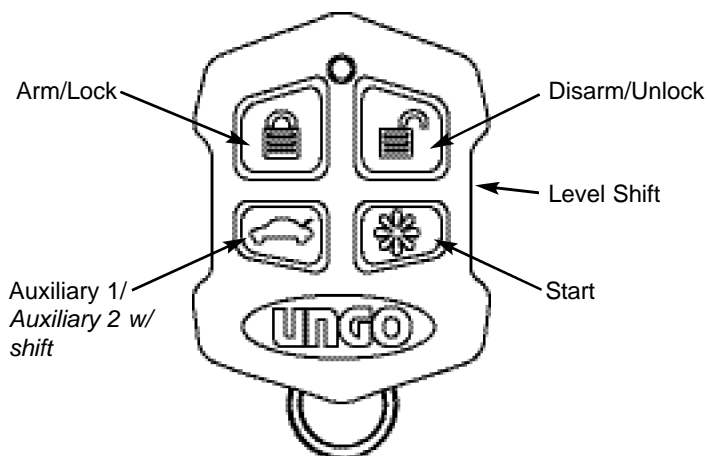
### 6.4 Valet/Override Switch

Prior to drilling the hole for the valet switch, make sure the switch is well hidden and can't be easily hit. Also, verify there is adequate space behind the valet switch to accommodate for the depth of the switch.

### 6.5 Status LED

Mount the status LED so that it is visible from both sides of the vehicle, if possible. Make sure there is adequate space behind the LED to accommodate for the depth of the LED.

## 7. Remote Transmitter Layout



## **8. Wiring Information**

### ***8.1 Heavy Gauge Starter Wires***

#### **RED: (+) Battery input.**

This wire is one of the two primary power inputs and must be connected to the battery or an alternate source of power that can supply at least 30 Amps.

#### **RED: (+) Battery input.**

This wire is one of the two primary power inputs and must be connected to the battery or an alternate source of power that can supply at least 30 Amps. If both RED wires are connected to the same power source, make sure the circuit capacity is rated for 60 Amps.

#### **PINK/WHITE: (+) Ignition 2 output.**

Connect to the vehicle's second ignition wire (if equipped) that switches +12V and remains on during cranking. This wire is also programmable as accessory 2 or starter 2 output. See Installer Programmable Features.

#### **ORANGE: (+) Accessory output.**

Connect to the wire that switches +12V to heater and/or air conditioning system. If the vehicle has more than one accessory wire add a relay(s) to power the extra accessory wire(s) or the PINK/WHITE wire may be programmed as accessory 2 output if not already used.

#### **PINK: (+) Ignition 1 output.**

Connect to the vehicle's main ignition wire that switches +12V and remains on during cranking.

#### **VIOLET: (+) Starter output.**

Connect to the starter wire coming from the key switch. If the built-in anti-grind/ starter defeat relay is used, see VIOLET/WHITE wire description.

#### **VIOLET/WHITE: (+) Starter input (anti-grind / starter defeat).**

If the antigrind / starter defeat feature is desired, follow the steps below:

1. Using a digital multi-meter, determine the wire from the ignition harness that shows +12V only during crank. Once the wire has been found, cut the wire and try cranking the vehicle again. The vehicle should be unable to start.
2. Connect the VIOLET/WHITE wire to the key switch side of the cut starter wire.
3. Connect the VIOLET wire to the starter motor side of the cut starter wire.
4. To verify the connections were made properly, try starting the vehicle. The vehicle should be able to start up. If not, double check the connection at the alarm main unit and the vehicle's starter wires.

## **8.2 Main 20-Pin Harness**

### **YELLOW: (+) Brake pedal input.**

Connect to the brake pedal wire that shows +12V when the pedal is pressed. The brake pedal input functions as a safety shutdown and must be connected.

### **VIOLET/WHITE: Tach input.**

Connect to the vehicle's tachometer wire or an injector wire if the tach wire is not available. See Installer Programming Step 13 to program the tach reference after installation. If a suitable tach wire is unable to be located, the Tachless mode may be programmed to operate without using this wire. **Note:** the Tachless mode is not recommended for extreme temperature climates.

### **YELLOW/BLUE: (-) Auxiliary 2 output 500mA.**

Connect to a relay for an optional feature such as a linear actuator, headlight circuit, window module, or etc. This auxiliary output can be programmed for momentary, timed, or latched activation.

### **BLACK/WHITE: (-) Dome light supervision output 500mA.**

Connect to a relay for optional dome light supervision upon disarming the security system. (See Dome Light Supervision diagram for assistance.)

### **GRAY: (-) Trunk trigger input.**

Connect to the wire that shows ground when the trunk/rear hatch is open.

### **GRAY/BLACK: (+) Glow plug (wait-to-start) input.**

Connect to the positive glow plug wire of diesel engine equipped vehicles. This wire should show +12 when the wait to start light is on, and will show ground when the light turns off. For vehicle's that show ground while the wait to start light is on, use a relay to invert the polarity. See Glow Plug Relay Diagram.

### **BLUE/WHITE: (-) Passenger unlock output 500mA.**

Connect to a relay to unlock the passenger doors when the system is configured for Driver's Priority Unlocking. (See Door Lock Diagrams for assistance.)

### **BLUE/ORANGE: (-) Ground when running output 500mA.**

Connect to an optional OEM security bypass module or other device. This wire will prove a ground output upon remote start activation, and will remain grounded until the remote start is shutdown.

### **BLACK: (-) Ground input.**

Connect this wire to bare metal, using a lock or star washer to prevent the screw from coming loose. If possible, use a factory bolt, rather than a screw.

### **RED: +12V Battery input.**

Connect to the vehicle's positive battery terminal.



**VIOLET: (+) Door trigger input.**

Connect to the wire that shows +12V when the door is open.\*

**GREEN: (-) Door trigger input.**

Connect to the wire that shows ground when the door is open.\*

**BLUE: (-) Hood trigger input.**

Connect to the hood pin switch. Be sure this wire shows ground when the switch is opened. This input functions as a safety shutdown and must be connected.

**ORANGE: (-) Armed output 500mA.**

This wire provides a ground output when the unit is armed. This wire can be used to activate an optional circuit interrupt or other device (i.e.: window module, etc).

**GREEN/BLACK: (-) Factory disarm output 125mA.**

This wire provides a ground output to disarm a factory security system when the remote is used to unlock the doors or start the vehicle.

**GREEN/WHITE: (-) Factory rearm output 125mA.**

This wire provides a ground output to rearm a factory security system when the remote is used to lock the doors or when the remote start shuts down.

**BROWN: (+) Siren output 3A.**

Connect to the siren's red wire. Connect the black wire of the siren to (-) chassis ground. (It is recommended to ground the siren at the same point as the main unit.)

**YELLOW/WHITE: (-) Auxiliary 1 output 500mA.**

Connect to a relay for an optional feature such as a trunk release solenoid, window module, headlight activation, etc. The Auxiliary 1 output can be programmed for momentary, timed, or latched activation.

**WHITE: (+/-) Parking light output (10A relay).**

The output polarity of this circuit can be selected for either (+) positive or (-) negative output via the internal jumper. Make sure to verify the polarity of the parking light circuit before setting the jumper.

**BROWN/WHITE: (-) Horn Honk Output 500mA.**

Connect to a relay to pulse the horn when the security system is triggered. (See Horn Honk Relay Diagrams for assistance.)

\* Diode isolate the door trigger wires for vehicles with separate door trigger wires.

**8.3 3-Pin Door Lock Harness:** (See Door Lock Diagrams for assistance.)

Green: (-) Lock

Red: Not Used

Blue: (-) Unlock

## **10. Plug-in Connectors**

### **2-PIN BLUE CONNECTOR**

Plug-in connector port for Valet/Override button.

### **2-PIN RED CONNECTOR**

Plug-in connector port for LED indicator.

### **4-PIN WHITE CONNECTOR (main)**

Plug-in connector port for dual stage shock sensor.

### **4-PIN WHITE CONNECTOR (second)**

Plug-in connector port for optional dual stage sensor such as an additional dual stage shock sensor, glass breakage sensor, or dual zone proximity sensor..

### **3-PIN BLUE CONNECTOR**

Plug-in connector port for optional Ungo-Net devices.

## **11. Programming Remote Transmitters**

Prior to programming new remote transmitters to the security system, make sure to have the desired transmitters ready.

### ***11.1 To Enter Remote Transmitter Programming***

To Enter Remote Transmitter Programming:

1. Turn the ignition ON, OFF, ON, OFF, and leave ON.
2. Press and hold the Valet/Override switch for 5 seconds.  
*The siren will chirp once.*
3. Press the Lock button on the transmitter.  
*The siren will chirp once.*
4. Press the Lock button on the transmitter again.  
*The siren will chirp twice.*
5. Repeat steps 3 and 4 for each additional transmitter.
6. Turn OFF the ignition when transmitter programming is complete.  
*The siren will chirp 3 times.*

### ***11.2 Two Car Remote Operations***

The 5-button remote transmitter is capable of controlling two vehicles with a single remote transmitter. To program the primary remote transmitter to the second vehicle, make sure to have the desired transmitter(s) ready.

### ***Programming the primary remote transmitter to the second vehicle:***

1. Turn the ignition ON, OFF, ON, OFF, and leave ON.  
*The siren will chirp once.*
2. Press and hold the Valet/Override switch for 5 seconds.  
*The siren will chirp once.*
3. Press Button 5 twice followed by the Lock button on the transmitter.  
*The siren will chirp once.*
4. Press Button 5 twice followed by the Lock button on the transmitter again.  
*The siren will chirp twice.*
5. Repeat steps 3 and 4 for each additional transmitter.
6. Turn OFF the ignition when transmitter programming is complete.  
*The siren will chirp 3 times.*

## **12. Programmable System Parameters**

The Ungo MS2105/MS2107 has 2 independent programmable parameter tables. One parameter table is for User's and the other is for Installer (see chapter 14). These parameter tables can be modified using the Ungo-Net computer interface or by using the Valet/Override button. The Ungo-Net interface allows for additional custom features and settings not accessible through the Programming Table.

## **13. User Programmable Parameters**

### **User Programming Table**

Feature	Button 1 (default)	Button 2	Button 3
1. Arming Mode	Active	Passive	
2. Auto Rearm	On	Off	
3. Arming Chirps	Normal	Silent	
4. Ignition Controlled Door Locking	On	Off	
5. Ignition Controlled Door Unlocking	All Doors	Driver's Door	Off
6. Override Code Programming	Code Set		
7. Remote Start in Valet Mode	Enabled	Disabled	
8. Automatic Starting	Every 2 Hours	Every Hour	
9. Engine Run Time	15 minutes	25 minutes	

### 13.1 User Parameter Descriptions

1. **Arming Mode:** Selects whether or not the system will automatically Arm when ignition is turned off.
2. **Auto Rearming:** Selects whether or not the security system will rearm if no activity is detected after Remote Disarming. (If Passive Door Locking feature was selected during installation, the system will also relock the doors.) Automatic Rearming only takes place if the system was Armed (actively or passively) for at least 10 seconds and then remotely disarmed.
3. **Arming Chirps:** Selects whether or not the security system will chirp when arm and disarmed.
4. **Ignition Controlled Door Locking:** Selects whether or not the doors will lock when the ignition is turned On. Ignition Controlled Door Locks will automatically lock the doors 10 seconds after the ignition is turned On. To prevent the keys from being locked inside the vehicle; the security system will not lock the doors if any of the doors is open when the ignition is turned On.
5. **Ignition Controlled Door Unlocking:** Selects whether or not the security system the doors will unlock when the ignition is turned Off. Ignition Controlled Door Unlocking can be configured to unlock all the doors or driver's door only.
6. **Override Code Programming:** Selects the number of times the Valet button must be depressed to override the system. The Override Code can be any number between 1 and 15. (Default setting is 1)
7. **Remote Start in Valet Mode:** Selects whether or not the remote start can be activated when the security system is in Valet mode.
8. **Automatic Starting:** Selects the timing interval for the automatic remote start function. When the Automatic Starting feature is enabled by the user, the vehicle will start and run every 2 hours or every hour depending on the programming option selected for this step.
9. **Engine Run Time:** Selects the length of time the engine will remain running during remote start operation.

### 13.2 Entering User Programming

1. Turn the ignition ON.
2. Within 5 seconds, press the Valet/Override button 2 times and hold for 2 seconds.  
*The siren will chirp, indicating that User Programming has been entered.*
3. Press the Valet/Override button the number of times equal to the Parameter to be changed.  
*The siren will chirp each time the Valet/Override button is pressed.*

4. Within 5 seconds, press the transmitter button corresponding to the desired operating mode that Parameter.  
*The siren will chirp a number of times equal to the transmitter button pressed.*
5. When finished, turn the ignition OFF to save changes.

### 13.3 Default Reset for User Programming

1. Turn the ignition ON.
2. Within 5 seconds, press the Valet/Override button 2 times and hold for 2 seconds.  
*The siren will chirp, indicating that Programming has been entered.*
3. Press transmitter button 3.  
*The siren will chirp 6 times indicating the reset signal has been received, and User Parameters have been reset to factory default.*

## 14. Installer Programmable Parameters

### Installer Programming Table

Feature	Button 1 (default)	Button 2	Button 3
1. Door Unlock Pulse	Single	Double	
2. Door Lock/Unlock Pulse Width	1 Second	3 Seconds	
3. Passive Locking	Off	On	
4. Door Entry Delay w/ Passive Arming	Off	On	
5. Ignore Dome Light Delay	Off	On	
6. Auxiliary 1 Output	Momentary	Timed	Latched
7. Auxiliary 2 Output	Momentary	Timed	Latched
8. Auxiliary 2 Activate on Arm	Off	On	
9. Trunk Disarm Feature	Off	On	
10. Lock on Remote Start	Off	On	
11. Lock on Remote Shutdown	Off	On	
12. Engine Start Sense	Tach Sense	Tachless Operation	
13. Program RPM	Learn RPM	Gas	Diesel
14. 2-way Transmitter Module	Learn Module ID	Learn Transmitter ID	
15. Ignition 2 Relay Programming	Ignition 2	Accessory 2	Starter 2
16. Horn Output Programming	Horn	Ignition 3	

Step 14 is reserved for use with optional Ungo-Net 2-way LCD transmitter module (included with MS2107).

## 14.1 Installer Parameter Descriptions

1. **Door Unlock Pulse:** Selects between single or double unlock pulse.
2. **Door Lock Pulse Width:** Selects between a 1-second or 3-second door lock pulse.
3. **Passive Locking:** Selects whether or not the door locks will automatically lock with Auto Rearming and Passive Arming.
4. **Door Entry Delay with Passive Arming:** Selects whether or not the door trigger input will be delayed for 15 seconds, allowing access to the Override switch. The door trigger is delayed only when the system arms passively.
5. **Ignore Dome Light Delay:** Selects whether or not the security system will ignore the door trigger for 20 seconds upon arming. For vehicles with timed dome light delays, the system will not detect a faulty door trigger upon arming.
6. **Auxiliary 1 Output:** Selects between momentary, timed, or latched output for Auxiliary 1.

*Momentary: Provides an output that will remain active as long as transmitter button is depressed.*

*Timed: Provides an output that will remain active for 30 seconds.*

*Latched: Provides an output that will activate when the transmitter button is pressed and remain active until the the transmitter button is pressed again.*

*The latched output can be programmed to reset when the security system is Armed or the ignition is turned On. (Requires the Ungo-Net computer interface for programming.)*

7. **Auxiliary 2 Output:** Selects between momentary, timed, or latched output for Auxiliary 2 (see step 8 for descriptions).
8. **Auxiliary 2 Activate on Arm:** The security system can be programmed to activate Auxiliary 2 when Armed. This feature can be used to turn on a piezo warning indicator, roll up windows, etc.
9. **Trunk Disarm Feature:** This feature will automatically disarm the security system when Auxiliary 1 is activated.
10. **Lock on Remote Start:** Selects whether or not the doors will lock after remote starting.
11. **Lock on Remote Shutdown:** Selects whether or not the doors will lock after remote start shutdown.
12. **Engine Start Sense:** Selects between Tach sense mode and Tachless operation. Tach sense mode should always be used in extreme temperature climates and in cases where the Tachless operation provides unsatisfactory operation.

13. **Program RPM:** This dual function programming step sets the engine type (default is gas) and learns the idle tach setting.  
Button 1: "Learns" the tach reference of the vehicle.  
Button 2: Selects gasoline engine type.  
Button 3: Selects diesel engine type.  
**Tach Learning notes:** To learn the tach setting of the vehicle, first set the engine type. If the vehicle is gasoline powered, then no adjustment is needed. Next, start the engine and enter the programming mode within five seconds. Select step 13 and press transmitter button 1 to learn. The LED will flash once to confirm tach learning, or five times if unable to learn the tach signal.
14. **2-way Transmitter Module:** *(Requires Ungo-Net 2-way Transmitter Module)*  
Button 1: *Learns the Ungo-Net 2-way module ID*  
Button 2: *Learns the 2-way transmitter ID. Once the remote programming routine has been entered, press button 1 on each 2-way transmitter (maximum 2).*
15. **Ignition 2 Relay Programming:** Allows Ignition 2 output to be programmed for use as a second ignition or second starter output instead.
16. **Horn Output Programming:** Allows the horn output to be programmed for use as an output to trigger an ignition 3 relay.

#### **14.2 Entering Installer Programming**

1. Turn the ignition ON.
2. Within 5 seconds, press the Valet/Override button 5 times.  
*The siren will chirp, indicating that Installer Programming has been entered.*
3. Press the Valet/Override button the number of times equal to the Parameter to be changed.  
*The siren will chirp each time the Valet/Override button is pressed.*
4. Within 5 seconds, press the transmitter button corresponding to the desired operating mode that Parameter.  
*The siren will chirp corresponding to the button depressed.*
5. When finished, turn the ignition OFF to save changes.

#### **14.3 Default Reset for Installer Programming**

1. Turn the ignition ON.
2. Within 5 seconds, press the Valet/Override button 5 times.  
*The siren will chirp, indicating that Programming has been entered.*
3. Press transmitter button 3.  
*The siren will chirp 6 times indicating the reset signal has been received, and Installer Parameters have been reset to factory default.*

## **15. System Test and Sensor Adjustment**

### **15.1 System Test**

1. Verify the Programmable Parameters are set.
2. Verify all wire connections are correct and secure.
3. Make sure none of the wires for the security system will interfere with safe operation of the vehicle.
4. Test all functions of the vehicle, i.e. power door locks, power windows, lights, etc.
5. Arm the security system; checking the siren chirps, parking lights, LED, and door locks.
6. Disarm the security system; checking the siren chirps, parking lights, LED, door locks, and dome light supervision.
7. Test all the entry points of the vehicle, doors, hood, and trunk/hatch. (Be sure to test all doors.)

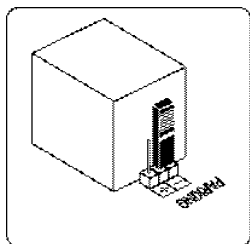
### **15.2 Dual Stage Sensor Test**

1. Turn the ignition On.
2. Within 4 seconds, press the Shift Button (Button 5) 3 times, then Button 3.  
*The siren will chirp 4 times indicating the sensor is ready to be tested.*
3. Test the sensitivity of the sensor by hitting various locations on the vehicle. (Do not hit the windshield or any other window. Be careful not to dent or damage any parts of the vehicle during shock sensor testing.)  
*The siren will chirp when a trigger impact is detected.*  
*One chirp indicates the shock sensor trigger.*  
*Two chirps indicates the warn-away trigger.*  
*Three chirps indicates the optional sensor.*
4. To make shock sensor adjustments:  
*Turn the adjustment screw on the shock sensor clockwise to increase the sensitivity.*  
*Turn the adjustment screw on the shock sensor counter clockwise to decrease the sensitivity.*
5. Turn the ignition Off when the desired sensitivity level is reached.

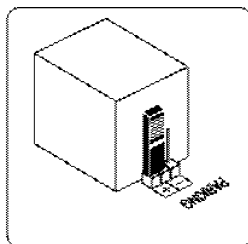


## 16. Parking Light Jumper Settings

The Parking Light Polarity Jumper selects the polarity (+/-) for the output of the on-board Parking Light relay.

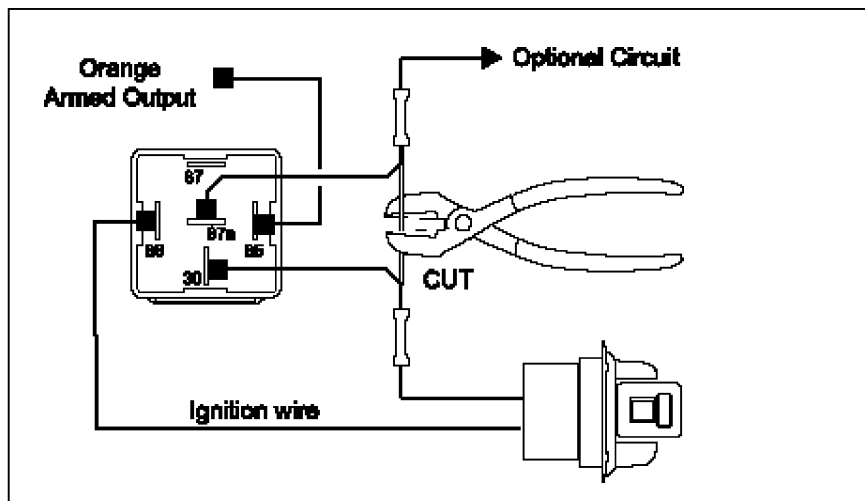


Negative

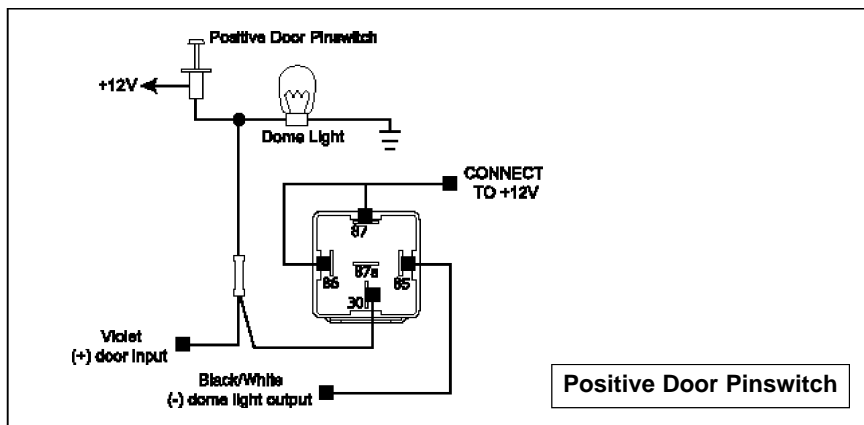
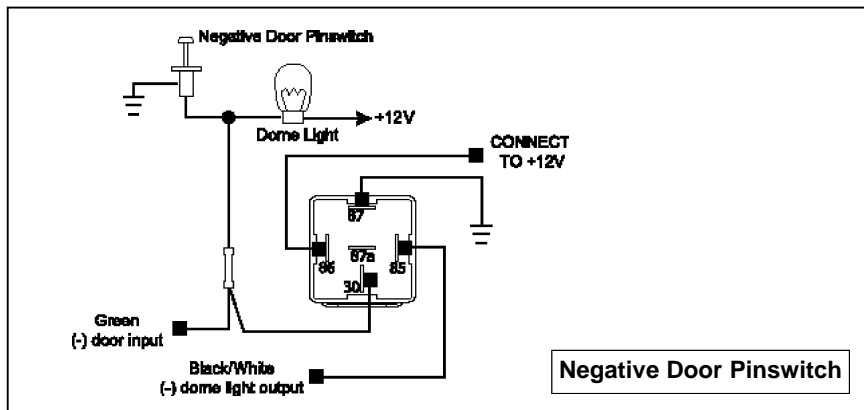


Positive

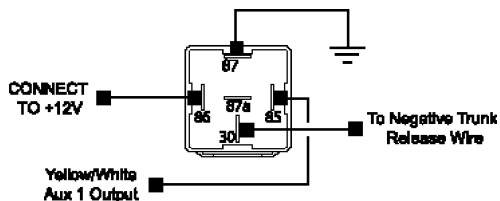
## 17. Optional Circuit Interrupt



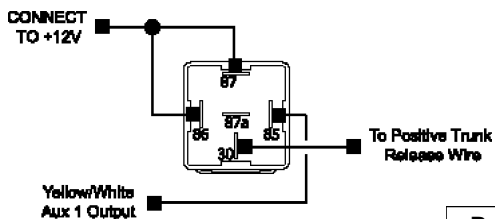
## 18. Dome Light Supervision Relay Diagrams



## 19. Trunk/Hatch Release Diagrams

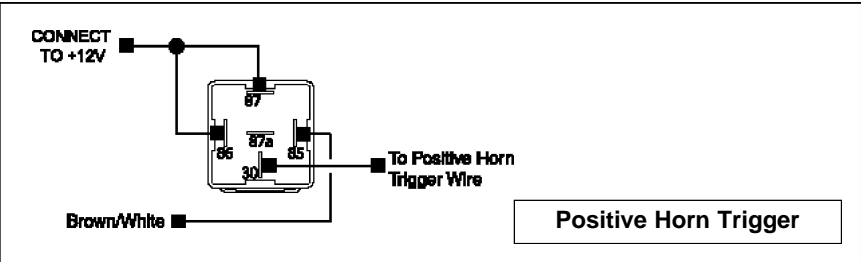
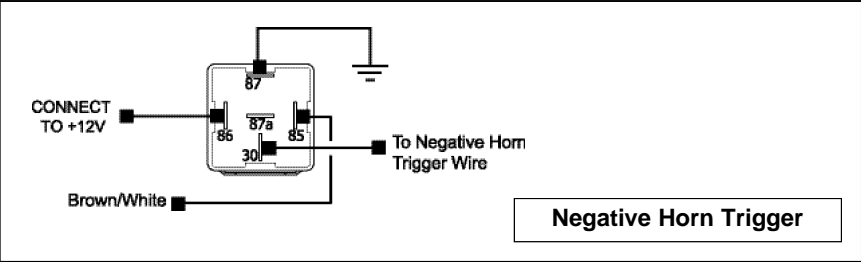


Negative Trunk Release Wire

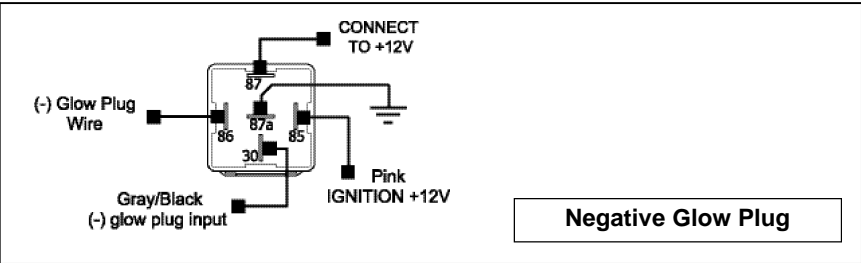


Positive Trunk Release Wire

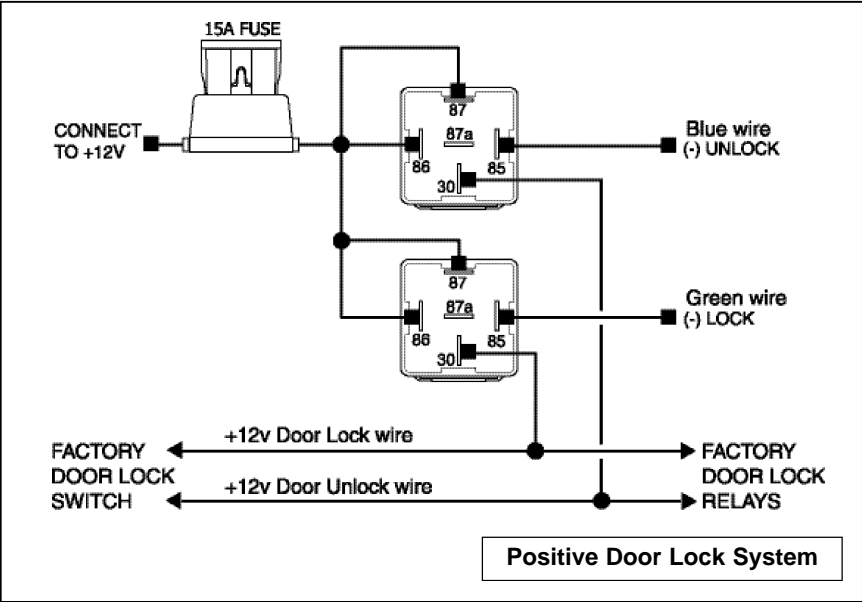
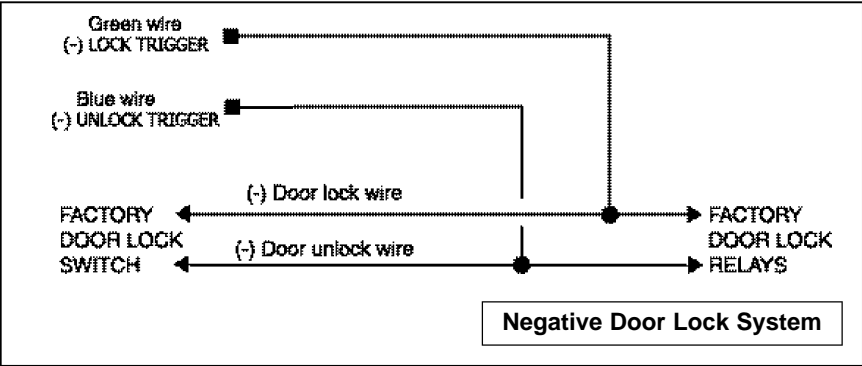
## 20. Horn Honk Wiring Diagrams

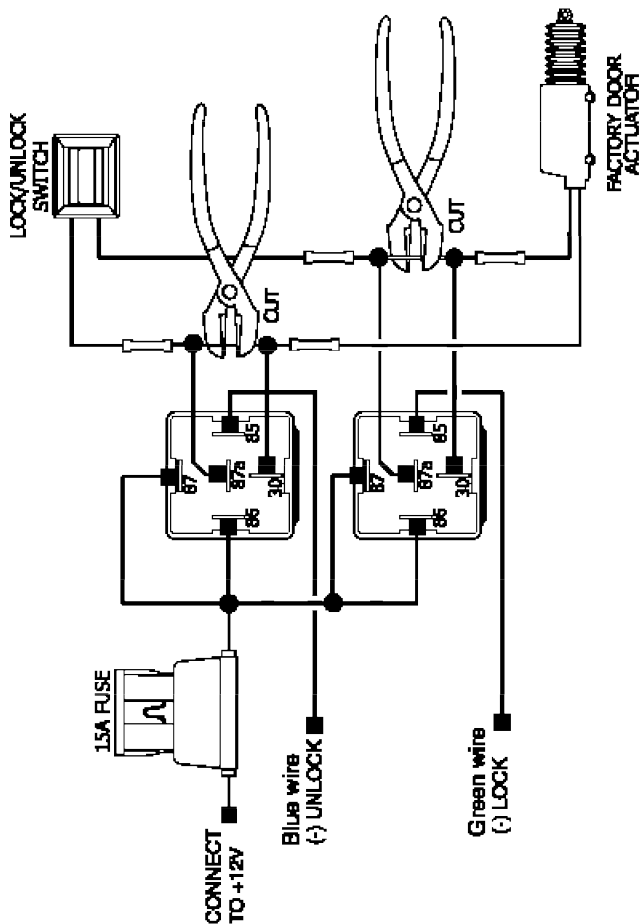


## 21. Negative Glow Plug Diagram

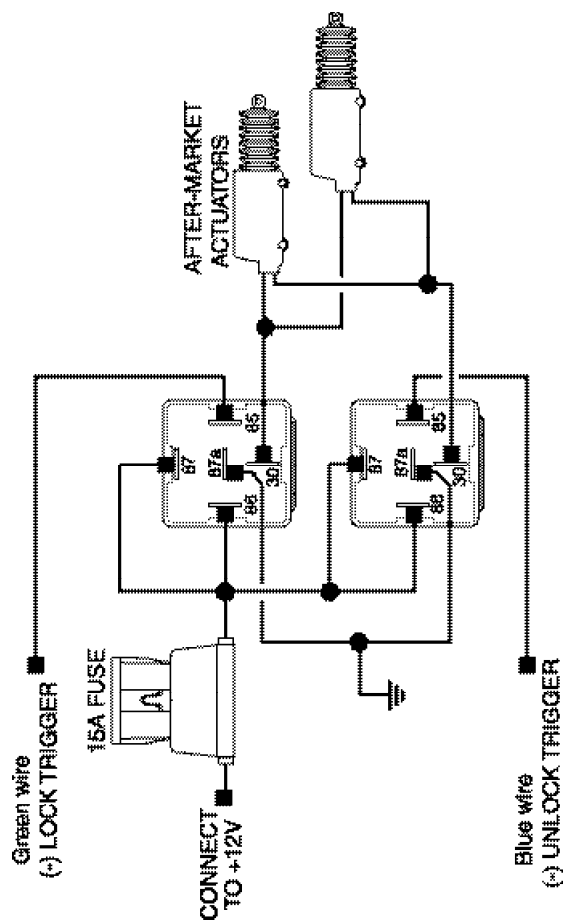


22. Door Lock Diagrams

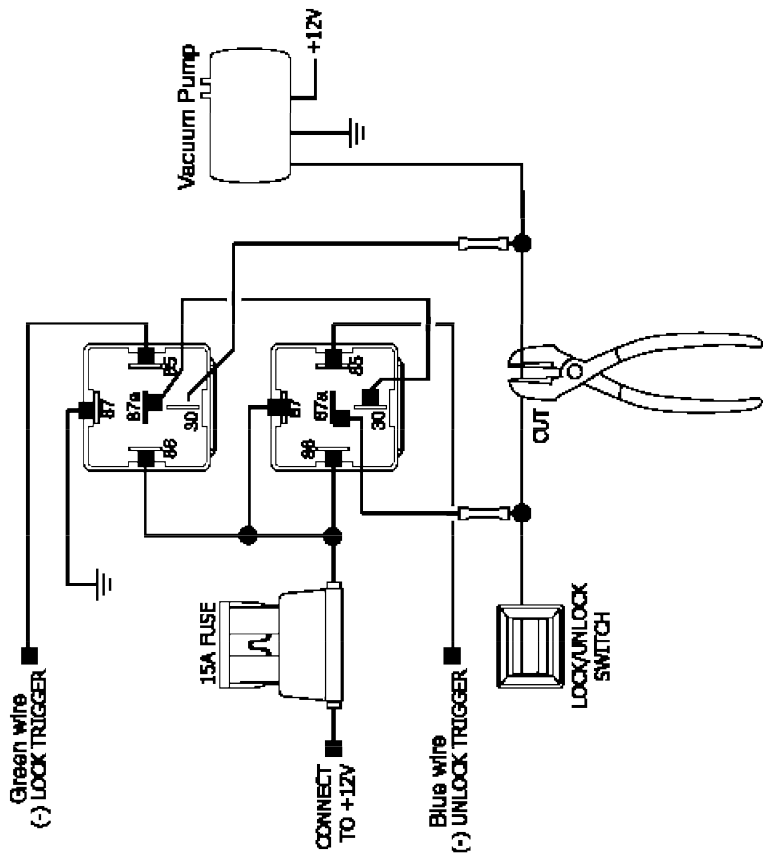




**Reverse Polarity Door Lock System**



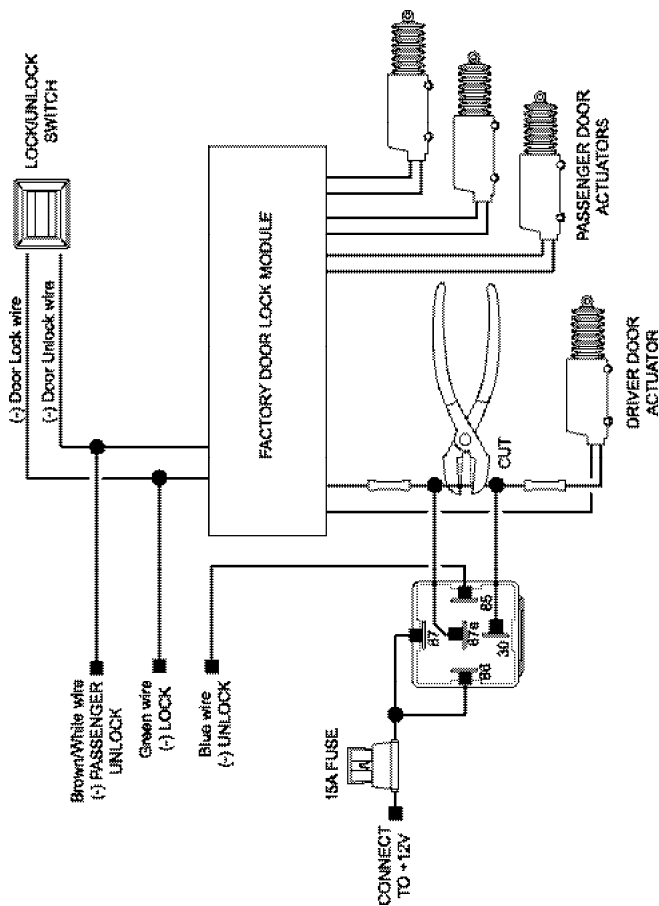
Actuator Diagram



Vacuum Pump System

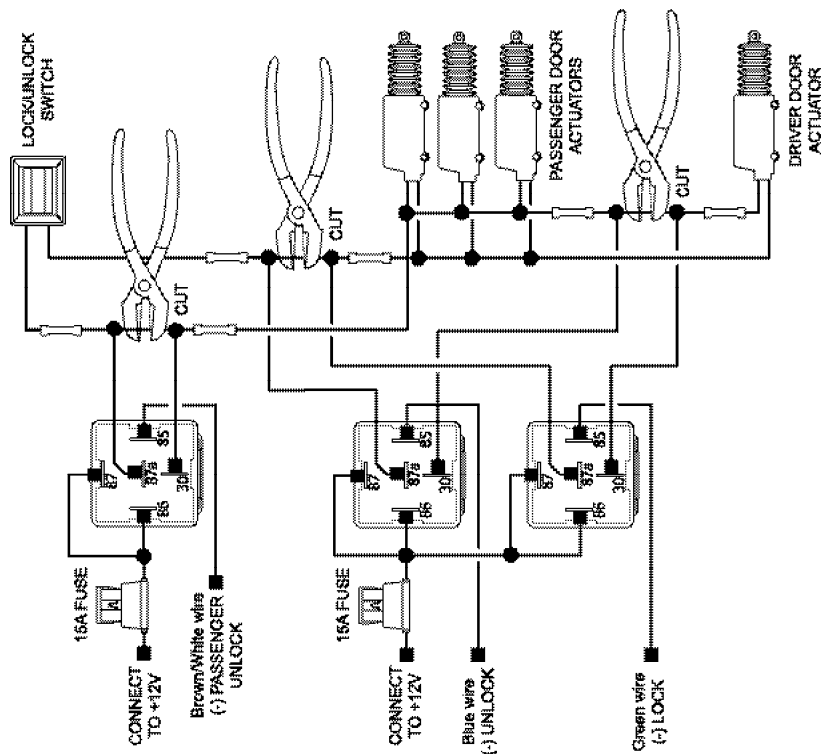


## 23. Driver's Door Priority Wiring Diagrams



**Negative Door Lock System with Driver's Door Priority**





**Reverse Polarity Door Lock System with Driver's Door Priority**

## 24. Status Indicator (LED) Functions

LED STATUS	FUNCTION
Off	System is disarmed in Active mode.
Slow Flash	System is Armed.
Rapid Flash	Passive arming indication and auto rearm.
Rapid Flash (after disarm)	System was triggered.
On Solid	Valet mode.
On Solid (after arming)	On for 3 seconds, shock sensor trigger has been bypassed.
On Solid (when disarmed and not in Valet mode)	Door or hood/trunk is open.

## 25. Siren Chirp Status

CHIRPS	FUNCTION
1 Chirp	System Armed
2 Chirps	System Disarmed
3 Chirps	System Disarmed, but alarm triggered while away.
4 Chirps	10 seconds after arming indicates defective sensor or trigger zone.
5 Rapid Chirps	Warn away triggered.

## 26. Troubleshooting

Symptom	Probable Cause	Suggested Correction
Alarm doesn't Arm/Disarm.	Alarm in Valet Mode. Ignition input has voltage on it. Missing +12 or ground.	Take alarm out of Valet mode. Turn key off and verify pink wire is connected to correct ignition wire. Check +12V and ground connections.
Alarm will not Passively Arm.	Passive arming is programmed Off. Wrong door switch polarity. Alarm in Valet mode.	Change arming mode to Passive arming. Change ignition input. Make sure alarm is not in Valet.
Alarm will not enter Remote programming mode.	Ignition was not left in the On position after turning it On & Off three times. Sequence not performed rapidly enough. Valet/Override switch is not plugged in or defective. Alarm is armed.	Repeat procedure quicker. Check connection on Valet button. Make sure the alarm is not in Valet or Armed.
Alarm chirps 4 times 10 seconds after the system is Armed.	Factory Dome light delay is longer than 10 seconds. Door switch or sensor is defective.	Set parameter for Ignore Dome Light Delay to On. Adjust or replace shock sensor.
Parking lights do not flash.	Wrong wire connected to the White wire. Polarity selection needs to be changed.	Correct the connection to the parking light wire. Move the jumper next to relay on board to correct polarity (+/-).
System Arms and Disarms, but doesn't chirp the siren.	Arming Chirps has been set to " Silent."	Set parameter for Arming Chirp to "Normal."

Symptom	Probable Cause	Suggested Correction
Dome light supervision does not activate upon Disarm.	Relay wired incorrectly.	<i>See Dome Light Supervision diagrams.</i>
Poor range with the remotes.	Antenna wire is grounded. Module is picking up interference from the vehicle's electrical system.	Make sure the antenna is not connected to ground. Relocate module or route antenna away from computer modules.
Vehicle starts using the key when the alarm is Armed.	Wrong starter wire is cut.	Locate the proper starter wire and reconnect the other wire.
Vehicle will not start when the alarm is Disarmed.	Bad connection on violet or violet/white wire.	Repair connection at starter wire. Replace module.
Keyless entry does not operate with remote.	Wrong door lock polarity. Wrong door lock wires are connected.	<i>See Door Lock Diagrams.</i> Verify the vehicle's door lock wires.
Ignition controlled door lock feature does not operate.	Ignition wire shows +12V at all times. Door is open. Door trigger input wrong polarity.	Connect to correct ignition wire. Close door. Change door trigger polarity.
Vehicle's horn honks when the alarm is Disarmed and door is opened.	Vehicle factory security system needs to be disarmed.	Locate the factory disarm wire and use the door Unlock pulse to disarm the factory alarm.
Diesel engine cranks before glow plug light turns off.	Wrong glow plug wire or wire not connected. Wrong glow plug wire polarity.	Connect gray/black wire to proper glow plug wire. Use a relay to change polarity (see diagrams).
Unable to learn tach.	Wrong tach reference wire connected.	Using a multi-meter locate another tach wire.

## 27. Warranty Information

This Ungo Security System is warranted against defects in material and workmanship. The main unit and remote controls are covered by this limited lifetime warranty. This Limited Lifetime Warranty applies to Ungo Security systems that have been installed by an authorized Ungo Security dealer. This warranty is to the Original Purchaser ("Owner") and to the original vehicle in which it was installed into. This warranty is not transferable to any subsequent owner(s) of the product(s).

### **Warranty Program:**

Main Unit	Limited Lifetime
Remote Controls	Limited Lifetime
LCD Remote Control	Three years from date of purchase
Siren	One year from date of purchase
Shock Sensor	One year from date of purchase
LED	One year from date of purchase
Valet/Override Button	One year from date of purchase

The *Warranty* does not cover batteries or products deemed damaged through alterations or installation. It also does not cover products mishandled, misused, neglected, abused, water damaged, or with removed/altered serial numbers.

### ***PROOF OF PURCHASE WILL BE REQUIRED FOR WARRANTY SERVICE OF THIS PRODUCT.***

This warranty does not cover the costs incurred for removal or reinstallation of the main unit and/or any damage to the vehicle or the vehicle's electrical system.

The sole responsibility of Clarion Corporation under this Warranty shall be limited to the repair or replacement of the product, at the sole discretion of Clarion Corporation.

If it becomes necessary to send the product or any defective part to Clarion Corporation, the product must be shipped in its original carton or equivalent carton, fully insured, with shipping charges prepaid. Clarion Corporation will not assume any responsibility for any loss or damage incurred in shipping.

ALL IMPLIED WARRANTIES EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW SHALL HAVE NO GREATER DURATION THAN THE WARRANTY PERIOD SET FORTH ABOVE. UNDER NO CIRCUMSTANCES SHALL CLARION CORPORATION BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OR INABILITY TO USE OF THE PRODUCT. BECAUSE SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE THE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

Should you have any difficulties with the performance of this product during warranty, please call: 1-800-GO-CLARION or visit your local Ungo dealer. You may also contact the National Service Manager at the following address below for additional service help you may need.

Clarion Corporation of America  
Attn: National Service Manager  
661 W. Redondo Beach Blvd.  
Gardena, Ca 90247

<b>clarion</b>	<b>Product Bulletin</b>			<b>PB00015</b>
	<b>Category:</b>	<b>Ungo</b>	<b>Date:</b>	<b>12-2-03</b>
	<b>Subject:</b>	<b>MS2105/7 Wiring Harness</b>		

### **Description:**

#### UNGO MS2105/7 Harness Colors

#### **20-Pin Main Harness**

<b><u>Wire</u></b>	<b><u>Ungo Color</u></b>
1 Brake (+)	<i>Yellow</i>
2 Tach input	<i>Violet/white</i>
3 Aux 2	<i>Yellow/blue</i>
4 Dome light (-)	<i>Black/white</i>
5 Hood input	<i>Blue</i>
6 Glow plug (+)	<i>Gray/black</i>
7 Pass Unlock	<i>Yellow/violet</i>
8 Ground w/run	<i>Blue/black</i>
9 Ground	<i>Black</i>
10 +12V	<i>Red</i>
11 Door input (+)	<i>Violet</i>
12 Door input (-)	<i>Green</i>
13 Trunk (-)	<i>Gray</i>
14 Armed output	<i>Orange</i>
15 Factory disarm	<i>Green/black</i>
16 Factory arm	<i>Green/white</i>
17 Siren	<i>Brown</i>
18 Aux 1	<i>Yellow/white</i>
19 Parking light (+/-)	<i>White</i>
20 Horn output (-)	<i>Brown/white</i>

#### **7 Heavy Gauge Wires**

<b><u>Wire</u></b>	<b><u>Ungo Color</u></b>
Starter input	<i>Violet/white</i>
Starter output	<i>Violet</i>
Accessory	<i>Orange</i>
Ignition 1	<i>Pink</i>
Ignition 2	<i>Pink/white</i>
Battery Input B	<i>Red</i>
Battery Input A	<i>Red</i>

#### **3-Pin Door Lock Harness**

<b><u>Wire</u></b>	<b><u>Ungo Color</u></b>
(-) Lock	<i>Green</i>
(-) Unlock	<i>Blue</i>
** NOT USED	<i>Red</i>